EFFECTIVENESS OF PRANAYAMA ON MENTAL HEALTH OF ORPHAN CHILDREN OF GREATER GWALIOR

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A Synopsis Submitted to

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DEPARTMENT OF YOGIC SCIENCES

Certificate

I hereby declare that the synopsis "**Effectiveness of Pranayama on Mental Health of Orphan Children of Greater Gwalior** " being submitted in the partial fulfilment of the requirement for the degree of Doctor of Philosophy in Yogic Science under the Department of Yogic Sciences, Lakshmibai National Institute of Physical Education Gwalior - 474002 during the academic year 2022-2023.

It is a bonafide record of original work carried out under the supervision of Dr. Mukesh Narwariya (Assistant Professor, Dept. of Sports Management & coaching LNIPE, Gwalior, M.P.) and co- supervision of Dr. Amrit Lal Guruvendra (Associate Professor, Dept. of Complementary And Alternative Medicine, DSVV, Haridwar, Uttrakhand.) and has not been submitted in full or part to any other university or institute for a degree or diploma.

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ABSTRACT

Orphaned children often experience higher rates of mental health problems compared to their peers with family, including anxiety, depression. These challenges are often linked to the loss of parental figures.

Pranayama, breathing exercises in yoga, can significantly improve mental health by reducing stress, promoting relaxation, and enhancing focus. This study examines the effectiveness of 16 weeks Yogic Intervention of Pranayama and Asanas on psychological variables among 80 Orphan Children will be selected and age ranging between 12 to 20 years of Greater Gwalior. Further, the total sample into 40 orphan children, will randomly assigned to experimental n= 40 and other will be

n= 40 in control group. Pre- and Post-Intervention assessments measured Depression, Anxiety, Stress. : Depression anxiety and stress scale, Mental Health Vishal Sood and Pooja Sharma: Cognitive Abilities Test, Madhu Gupta and Bindiya Lakhani : Cognitive Ability Test,

Sushma Talesara and Akhtar Bano : Mental Health Scale

Self efficacy A.K. Singh and Shruti Narain, Self Efficacy Test, Blood Pressure: sphygmomanometer .Results revealed significant improvements $p<0.05$ in the experimental group across all variables: reduced stress, anxiety, depression, Mental Health, Self Efficacy and Stabilized Blood Pressure. The control group showed no significant changes. These findings align with prior research Thanalakshmi Jagadeesan, et.al.2022, had done study on Effect of Bhramari Pranayama intervention on stress, anxiety. depression and sleep quality among COVID 19 patients in home isolation. Bhr.P intervention had a positive impact on psychological health as well as quality of sleep among the COVID-JS patients during home isolation.

This study advocates integrating Pranayama into Orphan Children to enhance mental health. Future research should explore long-term effects on Mental Health.

KEYWORD: Mental Health, Depression, Anxiety, Stress, Bhramari, Pranyama, Orphan, Blood Pressure.

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CHAPTER- I

INTRODUCTION

Yoga: Pranayama refers to union between body and mind or body, mind and spirit.

Having done that (asanas), breaking the flow of inhalation and exhalation is called *prāṇāyāma. (Patañjali Yoga Sutra 2.49).*

The impact of Pranayama to bring balance and health to the physical, mental, emotional and spiritual dimensions of the individual & Pranayama has been shown to have immediate physiological and psychological beneficial effect of body.

Pranayama can significantly lower anxiety levels reduce hypertension or high blood pressure. The benefits of such stress reduction include reducing the chance of various conditions, such as strokes, peripheral vascular disease, and coronary heart disease. Psychological Variables which are affected by Pranayama are as follows

Anxiety is a mood state characterized by marked negative affect and somatic symptoms of tension in which a person apprehensively anticipates future danger or misfortune (Barlow, 1988).Depression is a common and serious medical illness that negatively affects how you feel, the way you think and how you act. Fortunately, it is also treatable.

Mental Health: A state of mind characterized by emotional well-being, good behavioral adjustment, relative freedom from anxiety and disabling symptoms, and a capacity to establish constructive relationships and cope with the ordinary demands and stresses of life.

Confidence: The quality of being certain of your abilities or of having trust in people, plans, or the future.

According to Albert Bandura, self-efficacy is "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations." Self-efficacy is a person's belief in their ability to succeed in a particular situation. Such beliefs play a role in determining how people think, behave, and feel.

Physiological Variables which are also treated by pranayama as follow

Blood pressure can be defined as the pressure of blood on the walls of the arteries as it circulates through the body. Blood pressure is highest as its leaves the heart through the aorta and gradually decreases as it enters smaller and smaller blood vessels (arteries, arterioles, and capillaries).
As we seen Pranayama works on both ways physiological and psychological on the body.

STATEMENT OF THE PROBLEM

The statement of the problem is stated as **"Effectiveness of Pranayama on Mental Health of Orphan Children of Greater Gwalior".**

OBJECTIVES OF THE STUDY

1. To characterize the levels of Psychological variables (depression, anxiety, stress, confidence, mental health, self efficacy) and physiological variable (blood pressure) of an orphan children of gwalior.

2. To compare adjusted mean score of Psychological variables, Physiological variable and control group by considering their pre score of psychological variables and physiological variable as covariates.

DELIMITATIONS

1. 80 orphan children will be selected as the subject from orphanages
2. The selected subject will be divided into two groups,
   Experimental group (n=40)
   Control group (n=40)
3. The age of the subjects ranged from 12 to 20
4. The duration of training will restricted for the period of 16 weeks.
5. Each training session will be held for 50 minutes.
6. This study will be delimited to Children, Teenagers, and Adolescents only.

LIMITATION

1. Food habits, rest period and life style could not be controlled.
2. Mood, Interest and answer given by subjects cannot be controlled. hence will be treated as limitation of the study.
3. Any biasness from the respondent will be treated as limitation of the study.
4. The previous experience of the subjects regarding the test was considered as limitation of Study.

HYPOTHESIS

1. There is no significant difference in adjusted mean score of Psychological variables and physiological variable of an orphan children of Gwalior by considering their pre score of psychological variables and physiological variable as covariates.

SIGNIFICANCE OF THE STUDY

1. The present study may help the orphans to reduce their Stress level practicing selected yogic interventions.
2. The present study may help the orphans to reduce their Anxiety level practicing selected yogic interventions.
3. The present study may help the orphans to reduce their Depression level practicing selected yogic intervention.
4. The present study may help the orphans to increase their Mental Health practicing selected yogic intervention.
5. The present study may help the orphans to increase their Self Efficacy practicing selected yogic intervention.
6. The present study may help the orphans to increase their Blood Pressure practicing selected yogic intervention.

DEFINITION AND EXPLANATION OF IMPORTANT TERMS

DEPRESSION

Depression (major depressive disorder) is a common and serious medical illness that negatively affects how you feel, the way you think and how you act. Fortunately, it is also treatable. Depression causes feelings of sadness and/or a loss of interest in activities you once enjoyed. It can lead to a variety of emotional and physical problems and can decrease your ability to function at work and at home.

ANXIETY

Anxiety is an emotion characterized by feelings of tension, worried thoughts, and physical changes like increased blood pressure.

STRESS

Stress is a particular relationship between the person and the environment that is appraised by the person by taxing or exceeding his or her resources and endangering his or her wellbeing. Lazarus (1984). Stress is how a person mentally and physically reacts to circumstances that are considered difficult or challenging. Beckner (2004).

BLOOD PRESSURE

Blood pressure can be defined as the pressure of blood on the walls of the arteries as it circulates through the body. Blood pressure is highest as its leaves the heart through the aorta and gradually decreases as it enters smaller and smaller blood vessels (arteries, arterioles, and capillaries). Blood returns in the veins leading to the heart, aided by gravity and muscle contraction.

SELF EFFICACY

According to Albert Bandura, self-efficacy is "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations." Self-efficacy is a person's belief in their ability to succeed in a particular situation. Such beliefs play a role in determining how people think, behave, and feel.

MENTAL HEALTH

A state of mind characterized by emotional well-being, good behavioural adjustment, relative freedom from anxiety and disabling symptoms, and a capacity to establish constructive relationships and cope with the ordinary demands and stresses of life.

CHAPTER – II

LITERATURE REVIEW

srikanth n jois et. al. (2018) have done a study on the effectiveness of superbrain yoga on concentration, memory and confidence in school students. in which superbrain yoga (sby) is a simple exercise which involves squeezing one's earlobes with thumb and forefinger in a particular position and squatting following a prescribed breathing technique facing a particular direction. sby cleanses and energises the energy centers needed for the brain to function efficiently. sby would be inexpensive, easy to learn technique and could be practiced regularly by students to improve cognitive performance. the present study aims to find the effectiveness of sby on the concentration, memory, and confidence of school students. initially, 38 teachers were randomly selected from various schools in mysore district, india. they were briefed about sby and trained about the technique. these teachers later involved 1,945 students in sby, who were studying in their schools.

among them 948 were boys and 997 were girls, students' age ranged from 6 to 18 yrs with an average age of 12.5 yrs. the student consent was obtained to participate in this study. the number of students in class 1 to 5 was 706, 6 to 8 was 684 and 9 to 10 standards was 555. cross-sectional study design was used in the present sby study. in the present study, a questionnaire was used as the tool. Majority of the students (97.3 %) practiced SBY at school regularly. It was interesting to note that 55 % of students liked the practice of Superbrain Yoga and continued the practice at home during weekends. 70.5 % of students felt often that because of the practice of SBY their level of concentration has increased, 75 % of them were boys and 66 % were girls. 75.9 % of the students opined that after practicing SBY, they felt memory enhancement. 86 % of the students have given a positive feedback that SBY has helped them to face examinations more confidently and helped to overcome the fear of examinations.

K Alaguraja, Dr. P Yoga (2019) had done combined pranayama and meditation on practices on self confidence in which To achieve the purpose of the study thirty handball players were selected from Karaikudi, Tamilnadu, India during the year 2019. The subject's age ranges from 14 to 17 years. The selected students were divided into two equal groups consists of 15 players each namely experimental group and control group. The experimental group underwent a combined pranayama and meditation practices programme for six weeks. The control group was not taking part in any training during the course of the study. Self Confidence was taken as criterion variable in this study.

The selected subjects were tested on Self Confidence was measured through Vealy's trait sports confidence inventory (TSCI) assessment. Pre-test was taken before the training period and post-test was measured immediately after the six week training period. Statistical technique't' ratio was used to analyse the means of the pre-test and post test data of experimental group and control group. The results revealed that there was a significant difference found on the criterion variable. The difference is found due to combined pranayama and meditation practices given to the experimental group on Self Confidence when compared to control group.

Abhishek K Bhardwaj et. al. (2015) had done a study on Effects of Long term Intervention of Comprehensive Yoga on Level of Self-confidence in High School Students in which . Fifty students with ages ranged between 13 and 16 years were selected as the participants; all of them were high school students from a north Indian school. Agnihotri's Self-confidence Inventory was administered to assess the level of self-confidence. The study was a before and after group design and this was a single group study. Signed informed consent was taken from all the participants before starting the actual study. Three months of yoga intervention was provided to the participants. Obtained data were analyzed using paired t-test. Significant difference was found in the level of self-confidence ($p<0.01$) when the pre data was compared with the post. In conclusion, the long term practice of yoga can be an effective tool to enhance the level of self-confidence in the adolescence.

Goli Mehralian , Mahdieh Salehi ,.et.al.(2022) had done a study behavioral disorders in children and adolescents are common and debilitating problems, which are usually seen for the first time in the early years of elementary school. Therefore, the present study aimed to develop a yoga-based educational package and determine its effectiveness on behavioral and emotional disorders in children. The first phase was to develop a training package with a qualitative method and the second phase was to evaluate its effectiveness through a quasi-experimental design (pre-test-posttest with a control group). The statistical population of the study in the first phase included all professors and experts in the field of child psychology and mindfulness, physical education, and yoga in 1398-1397 that 7 of these experts were selected by judgment and the content validity of the educational package was confirmed. The statistical population of the research in the second phase was the 7-10-year-old female children of the Welfare Organization of Tehran in 1398-1397. Welfare girl children aged 7-10 years were selected by available sampling based on entry and exit criteria. Ackenbach (1991) questionnaire was used to collect information and a yoga-based mindfulness training package (researcher-made) was used for teaching. Data was analyzed by multivariate analysis of covariance. Results: The mindfulness training package had a significant effect on three dependent variables of anxiety, depression, and aggression.

Thanalakshmi Jagadeesan, et.al.(2022) had done study on Effect of Bhramari Pranayama intervention on stress, anxiety. depression and sleep quality among COVID 19 patients in home isolation in which COVID-JS outbreak is considered to be a major public health concern as it has a negative impact on the patient's psychological health. In addition, patients under home isolation might be more panic and in stress. In this study, we examined the effect of

Bhramari Pranayama (Bhr.P) intervention on patients' psychological distress during home isolation. Ninety-two asymptomatic COVID-IS patients were recruited from the host hospital and willing patients who satisfied the inclusion criteria (n = 42) were selected for the study. The patients were given Bhr.P intervention (20 min) through online for 15 days. Participants were assessed with Depression Anxiety and Stress Scale-2J (DASS-21), Pittsburgh Sleep Quality Index (PSQI), and Quality of life (WHOQOL-BREF) at baseline and post-intervention. Bhr.P practice has shown a significant ($P < 0.05$) reduction in DASS21 score of depression, anxiety and

stress. In addition, the patients stated significant improvement in quality of sleep (PSQI; $p < 0.05$) and quality of life (WHOQOL-BREF; $p < 0.05$) after the intervention. Otir findings indicate that Bhr.P intervention had a positive impact on psychological health as well as quality of sleep among the COVID-JS patients during home isolation. However, it needs to be confirmed by mtilti-site randomized controlled trials.

Suprabha Srivastava.et.al. (2017) had done a study on Interventional Effect of Bhramari Pranayama on Mental Health among college Students. In which Mental health as a being of well being in which individual realize his or her own abilities, can cope with normal stress of life, can work productively and fruitfully, able to make his or her community (World Health Organization, 2014). The present study is aimed to measure the interventional effect of Bhramari Pranayama on Mental Health in students. Total 60 subjects of Dev Sanskriti Vishwavidyalaya, Haridwar who enrolled in under graduate courses were selected. A mental health scale (Kamlesh Sharma 1996) was administered as a single group pre and post study. Fifteen minutes Bhramari Pranayam exercise session for 20 days used as an intervention variable in the study. Results revealed that Bhramari Pranayama intervention was found significant effect on mental health and increased level of mental health was found in post study in comparison to pre study. This concludes that Bhramari Pranayama provides a means to individual peace, happiness, develops optimism attitude, self esteem and proper coordination between mind and body.

CHAPTER-III

RESEARCH METHODOLOGY

This chapter will describe the Research design, Selection of subjects, Selection of variables, Tools of data collection, Process of Data collection, Yogic Intervention for orphans and Statistical technique.

RESEARCH DESIGN

In the Present Investigation Randomized pre post control group design will be used.

SELECTION OF SUBJECTS

For study (n= 80) Eighty Orphan Children will be selected and age ranging between 12 to 20 years of age. Further, the total sample was equally bifurcated into 40 orphan children, who does have no prior yoga experience, were experimented with specific yogic intervention, other 40 will be in control group. The purposive sampling technique will be applied for selection criterion.

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SELECTION OF VARIABLES

1. Depression.
2. Anxiety.
3. Stress.
4. Mental Health
5. Self efficacy
6. Blood Pressure.

TOOLS OF DATA COLLECTION

The following tests will be used to investigate the selected variables for the study-

1. DEPRESSION ANXIETY AND STRESS SCALE (DASS) :-

DASS 21 scoring **is** a way to measure distress along the 3 axes of depression, anxiety and stress**.** Each of the 21 items is rated on a four-point scale ranging from 0 to 3 Scores for each axis are calculated by summing the scores for the relevant items. The minimum possible score is 0 and the maximum possible score is 56 The scores can be interpreted as normal, mild, moderate, severe, or extremely severe The reliability of DASS-21 showed that it has excellent Cronbach's alpha values of 0.81, 0.89 and 0.78 for the subscales of depressive, anxiety and stress respectively.

2. Vishal Sood and Pooja Sharma Cognitive Abilities Test :-

(CAT–SVSP) Hindi/English.

This scale consists 76 items divided into Four Cognitive Abilities –

I. Verbal,

II. Numerical,

III. Abstract Reasoning,

IV. Verbal Reasoning.

It was administered on students of class 7th and 8th, age group 12 to 14 years.

3. Madhu Gupta and Bindiya Lakhani. Cognitive Ability Test :-

(CAT–GMLB) English.

This test consists 40 items divided into Five Dimensions –

I Memory,

II Awareness,

III Understanding,

IV Reasoning ability,

V Problem Solving Ability.

It was administered on 300 students studying in secondary and senior secondary schools.

4. Sushma Talesara and Akhtar Bano. Mental Health Scale:-

3 Dimensions – 1. School Related Cause

2. Home Related Cause

3. Peer Group

Age Group 14-20 years

5. A.K. Singh and Shruti Narain, Self Efficacy Test

20 items divided into 4 area

1. Self Confidence
2. Efficacy Expectation
3. Positive Attitude
4. Outcome Expectation

Age Group 12 Years and Above

COLLECTION OF DATA

The collection of data is completely depend on the performance of all these specific yogic intervention by experimental group for 16 weeks Sample will be tested twice (Pre-Post) with an interval of minimum 16 weeks of training.

Dependent Variables :-

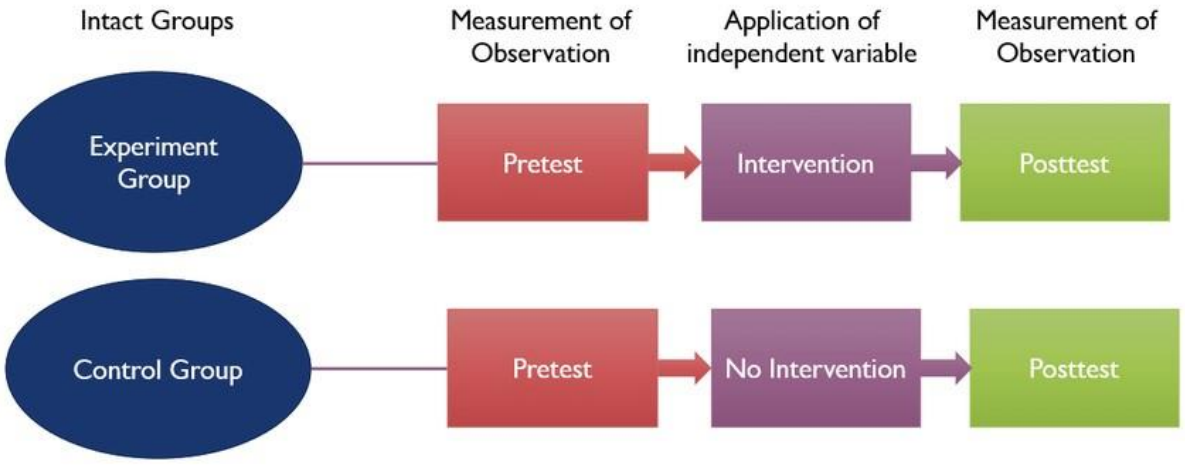
1. Depression Anxiety and Stress Scale -21
2. Vishal Sood and Pooja Sharma Cognitive Abilities Test.
3. Madhu Gupta and Bindiya Lakhani Cognitive Abilities Test.
4. Sushma Talesara and Akhtar Bano. Mental Health Scale:- 5. A.K. Singh and Shruti Narain, Self Efficacy Test
6. Blood Pressure.

Independent Variables :-

1. Omkar and Prayer
2. Loosening Practices
3. Nadi Sodhan
4. Anulom Vilom
5. Bhramari Pranayam
6. Shavasana

YOGIC INTERVENTION

The following exercises would be carried out for 16 weeks. The training would be given 5 days a week subjects. Every training session will be of 50 minutes according to the capability and availability of the subjects. Control group will follow their daily routine.



STATISTICAL TECHNIQUES

The data will be measured and evaluated, using the "ANCOVA" statistical technique. Level of significance will be set at 0.05.

EXPECTED OUTCOMES

This study anticipates that the 16-week yogic intervention will significantly reduce Stress, Anxiety, Depression, and Improve Mental Health among Orphan Children while enhancing their psychological well-being, as evidenced by standardized scales. Intervention is expected to improve Mental Health through pranayama practices and stabilize blood pressure by promoting relaxation and cardiovascular efficiency. These outcomes align with prior research demonstrating yoga's efficacy in stress modulation and suggesting that regular practice can serve as a cost-effective, holistic strategy to enhance mental resilience in high-stress policing environments. The findings may advocate for institutional integration of yoga into Orphanages to mitigate Children’s Mental health risks and improve overall performance.

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